

2007 BIENNIUM STATEWIDE INFORMATION TECHNOLOGY PLAN

A Report Prepared for the

Legislative Finance Committee

By
Greg DeWitt

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Legislative Fiscal Division



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INTRODUCTION

The legislature, in the 2001 session, passed the Montana Information Technology Act¹ (the act). The act redefined how Montana government information technology (IT) resources are governed. The act formalized the planning for IT resources by requiring a strategic planning processes for the development, management, and maintenance of IT resources at both the statewide and agency levels of state government. The act required biennial updates of all plans and incorporated legislative review and input prior to finalizing the biennial statewide plans. This report summarizes the differences between the approved statewide plan for the 2005 biennium (current plan) and the proposed update for the 2007 biennium (plan update). Besides having two legislators on the Information Technology Board that advises the Department of Administration on IT governance issues, the presentation of the plan update to the March 2004 meeting of the Legislative Finance Committee (LFC) is the primary opportunity for the legislature to influence the contents of the biennial statewide IT plan prior to it being finalized. For this reason, LFC members may wish to carefully review the direction the proposed plan sets for the state and identify any concerns relative to fiscal implications and policies.

BACKGROUND

HB 2 passed by the 1999 legislature authorized an interim study of the governance and management of IT. The study was authorized to address legislative concerns regarding state agencies' investments in and expenditures for information technology hardware, software, and services. Language in HB 2 assigned the study to the LFC and authorized it to review and assess Montana's governance, policy, planning, and budgeting structures and processes that enable the legislature to make policy decisions relevant to IT budget issues. The primary goal of the study was to provide recommendations for an IT governance structure that would enable making future policy decisions that minimize costs, reduce duplication, and maximize efficiencies while providing the greatest possible services to Montana's citizens. The study found that a more formalized strategic planning process linked to the budgeting process would move the state closer to the primary goal. The study committee made recommendations to the LFC that culminated in passage and approval of the Information Technology Act² during the 2001 session and provided the current IT governance framework for the state.

The strategic planning process directed by the act requires a statewide IT strategic plan that adheres to statutory policies³ and that sets the overall direction for how Montana state government should develop and manage IT resources. The act also requires separate agency plans that are based on the direction presented in the statewide plan, but apply the guidelines in a way that apply to the agency specific customer service issues and requirements. The act requires approval of agency plans by the chief information officer for Montana and specifies that agency budget requests for IT resources must conform to approved agency IT plans.

The act specifies that the statewide plan must be approved by April 1 of even-number years and that prior to that the updated plan must be provided to the LFC at its next meeting following March 1. Because of this requirement, the updated plan is being presented to the LFC. This report summarizes the updated plan and identifies the significant differences between the current plan and the plan update, as well as the significant fiscal issues implied in the plan update. LFC members are encouraged to review the plan update and identify any concerns they have within the committee powers and duties as

¹ Title 2, Section 17, Part 5, MCA

² The Information Technology Act was enacted by passage and approval of SB 131 during the 2001 Montana Legislature

³ 2-17-505, MCA (see Appendix A for IT policy statement)

defined in statute, which basically includes: 1) identifying information technology issues likely to require future legislative attention; and 2) evaluating proposed information technology policy changes and the fiscal implications of the proposed change.

PRESENTATION OF PLAN UPDATES TO THE LEGISLATIVE FINANCE COMMITTEE

As stated, the genesis for the Montana Information Technology Act came from a LFC study of IT governance and from LFC recommendations following the study. The act includes two areas for formal legislative member involvement during the interim:

- One senator and one representative are appointed to serve on the Information Technology Board
- Biennial plan updates are required to be presented to the LFC prior to the plan being finalized

Both requirements for interim legislative involvement were included to allow legislative concerns to be raised and considered prior to finalizing the biennial state IT strategic plans. The presentation of the draft plan at its next meeting following March 1 of even number years allows an opportunity for the committee and the public to raise concerns prior to the plan being finalized and could influence the final two-year plan and subsequently how agencies prepare their agency IT strategic plans and related budget requests.

COMMITTEE ACTION

The primary role for the committee when the plan is presented by the Department of Administration is to raise concerns it has with:

- The direction the plan leads the state regarding its investment in IT
- Specific goals, strategies, or initiatives presented in the plan

The committee may also use this opportunity to identify statutory changes that would improve Montana's governance of IT resources or improve the factors for a successful plan implementation. Concurrence in the plan by the committee does not suggest a future approval of related budget requests, it only signals agreement that the plan is heading Montana in a direction favorable to committee consensus.

STRATEGIC PLAN SUMMARY

COMPARISON: CURRENT AND UPDATED PLANS

Statewide Direction

The state IT strategic plan exists primarily to provide overall direction for state agencies in developing agency strategic plans for the development and management of IT resources. The state plan provides the constraints within which agencies should use IT resources to support their specific business missions. The state plan is important because it establishes the guidelines for how all state IT resources will be managed and, in doing so, facilitates the following across the entire state:

- Minimizes unwarranted duplication of systems
- Promotes consistency and standardization of hardware and software to foster sharing of information between agencies and promote efficiencies in the management of IT resources
- Enhances accountability when developing and managing IT resources

Outline of IT Strategic Plan Update

The plan update does not deviate significantly from the principles contained in the current plan. Instead, the plan update shifts the focus from technologies to business management practices. In doing so, the plan update recognizes that IT resources do not exist in-and-of-themselves, but as resources to support the business processes of state government and compete with other resources for limited funds. Appendix A provides a summarized side-by-side comparison between the current and updated plans for the following major plan sections:

- Theme
 - Roadmap for the Future
- Guiding principles
 - Values that define how state IT organizations would function under the plan update
- Goals and strategies
 - Goals of the plan and the strategies identified for achieving the goals
- Strategic initiatives
 - Strategies included in the plan update that would affect almost everyone in state government as well as Montana's citizens and businesses
- IT Issues
 - Issues specifically identified that are considered critical factors that affect all IT organizations and could heavily influence the goals, strategic initiatives, and actions of the plan update

If more details are desired, the reader can obtain copies of:

- The current plan via the Internet at:
<http://www.discoveringmontana.com/itsd/stratplan/statewideplan.asp>
- Printed copies of the current plan or the plan update from Kyle Hilmer, Chief of the Policy and Planning Services Bureau, (406) 444-5476 or E-mail: khilmer@mt.gov

FISCAL IMPLICATIONS OF THE PLAN UPDATE

As stated, the state IT strategic plan is intended to provide statewide strategic direction for how IT resources are to be developed and managed. As such, the state plan has no direct budgetary impacts but only guides and constrains how agencies develop and manage IT resources. The real fiscal impacts arise when agencies apply the principles of the state plan to the IT resources that support agency missions. The act requires that agencies update their IT strategic plans when the state plan is updated or as situations arise that necessitate earlier updates. The act also requires Executive Budget requests for IT resources to be supported by the agency IT strategic plans, linking IT planning to the budgeting process.

Although no fiscal impacts can be directly tied to the state IT strategic plan, it does include the general issues that are contained in goals, strategies, or strategic initiatives and are likely to have fiscal impacts during the coming biennium, if implemented. As such, the LFC may wish to consider and comment on the following:

- Business planning
- Data management
- Personnel maintenance

Business Planning

The plan update recognizes that IT resources exist to support the business processes of state government and the citizens and businesses served. As such, business needs must drive IT system development and

IT must not drive business processes. IT systems can be only as effective as the business processes they support. The plan update identifies the need for a process to critically review and, if necessary, redesign state business processes before new IT systems are designed and implemented to support an old business process. Often, expensive IT systems are implemented to support inefficient business processes, when a redesign of an inefficient business process could either eliminate the need for the IT system or could require a different IT system.

The definition of a business process as used above is an open-ended concept that could consist of all elements for administering a large program. For example, in executing a federally mandated program it might include such elements as: 1) determining client eligibility; 2) making payments to or on the client's behalf; 3) monitoring compliance; and 4) making reports to the federal agency in charge of the program. Or, a business process could entail issuing and monitoring licenses for a specific industry. In any case, when an IT system is developed to support a business need, the most fiscally responsible approach would be to optimize the business process prior to spending scarce funds to design an IT system to support the process.

The Montana Information Technology Act requires formalized strategic planning for IT resources, but Montana law does not require a formalized strategic planning process for the businesses IT resources support or on a statewide basis. No process is required to formally review agency business processes, except:

- The duties of the Legislative Fiscal Analyst to conduct investigations and studies to identify possibilities of effecting economy and efficiency in state government; and
- The duties of the Legislative Auditor to conduct a financial and compliance audit of every state agency every 2 years and to conduct a special audit whenever the Legislative Auditor determines it necessary

Without routine reviews of state business processes, changes made to federal laws, state laws, or other environmental factors could cause old effective business processes that were once efficient to become obsolete, ineffective, and inefficient. Developing IT resources to support obsolete business processes could be an inefficient use of state fiscal resources.

Committee Options:

Given the above, does the committee wish to investigate options for a more formalized process for planning of other state functions and business processes? If it does, the committee may wish to consider the following options:

- 1) The committee may wish to continue to rely on agency management and the legislative processes mentioned above to monitor state business processes for inefficiencies and take no action at this time.
- 2) The committee may wish to direct staff to further evaluate the options for formalized business process reviews and report the findings and options to a future committee meeting. If this option is selected, the interim work plan may need to be adjusted to free up resources for the effort.
- 3) The committee may wish to consider seeking legislation for:
 - a) An interim study of statewide strategic planning
 - b) An interim study of a formalized process for business process reviews within state government
 - c) A statewide strategic planning process
 - d) A formalized process for business process reviews within state government

Data Management

The plan update identifies data management as an issue and as a strategic initiative. Data management is a complex issue with the following factors:

- Data volumes on the state applications continue to grow. Over time, costs to store a unit of data have decreased, but because the volume of data has grown, the net cost to handle state data has continued to rise
- Data captured and stored at one time using the then current technology must often be retrieved and used at a later time by a different technology
- Similar data stored and managed on multiple systems across state government often needs to be updated (i.e. when a citizen's address changes), leaving open the possibility for data inconsistencies
- Data stored on different systems are often managed by different agencies or business process owners with different security requirements and needs

Addressing these complex data management factors will likely have a significant fiscal impact to implement. In addition to the direct fiscal impact to implement, other issues the committee should be aware of include:

- Should the data management solution be implemented in a centralized or decentralized approach and how should the development and operating costs be funded?
- When similar data exists, should one business process owner be responsible for ensuring consistency of the data? If so, which business process owner should be responsible for the data?
- What data security requirements should apply to common data?

Committee Action

The above information for data management is presented primarily to inform the committee of some of the issues surrounding the topic. However, the committee may wish to provide guidance to the Department of Administration on which approach (centralized or decentralized) the committee believes the legislature would be most receptive. The plan update states that Montana will use a centralized approach to the infrastructure used to address the document management issues, because the approach best matches the general rules for such decisions as presented later in this report.

Personnel Maintenance

The plan update identifies personnel maintenance as a goal, strategic initiative, and an issue that could adversely impact how IT systems are delivered and perform. The personnel maintenance issue could also adversely impact the state business processes the IT systems support. The issue of personnel maintenance is not exclusive to the IT profession, but impacts other non-IT segments and programs of state government.

According to statistics included in the plan update, 27 percent of state IT staff and 60 percent of state IT managers are eligible to retire today. This is in contrast to the current turnover rate of 7 percent for IT staff. The plan update recognizes the near-term impacts of a mass retirement of state IT professionals and the need to maintain the competencies of state IT staff into the future.

Personnel maintenance goes beyond the immediate bubble of retirement-aged IT professionals and includes the ongoing need to recruit, retain, develop, and maintain appropriately trained IT staff with the right skills and knowledge levels needed to support IT processes into the future. Personnel maintenance implies the following fiscal pressures for the state:

- Pressures on personal services to allow competitive pay for IT staff so they are not lured away from the state by private sector alternatives able to offer higher levels of pay and to allow for career ladders for IT professionals as part of a succession planning strategy
- Pressures on training costs to allow for staff development, succession planning, and maintenance of skills appropriate to state IT resources

Personal Services Pressures

Montana law allows for an alternative compensation system to the traditional statewide classification based system of pay. The alternative compensation system currently implemented in Montana, called the Broadband Pay Plan⁴, allows for compensating personnel based on attainment and performance of competencies. IT professionals were among the first classes of state workers to be covered by an alternative compensation system. However, except for pay levels for positions associated with the Broadband Pay Plan that exist when base year funding is developed for the Executive Budget, the Broadband Pay Plan has not historically been funded outside the general legislative pay plans. If the state continues to use the Broadband Pay Plan as a way to address the personal services pressures identified above, the legislature may see separate requests for Broadband Pay Plan increases in program budgets that are over-and-above those included in the executive pay plan request.

Training Cost Pressures

The plan update identifies training for IT professionals as a component of a strategic initiative. As agencies develop their agency IT strategic plans, training for IT professionals may be elevated to a higher priority within agencies and subsequently included as decision packages of the Executive Budget. A strategy for addressing the training needs for IT professionals is to establish a minimum annual training standard. The plan update references an accepted IT industry standard of 10 days of annual training for IT professionals. Since the state currently has no standard for training, any training standard implemented in the state would likely increase training costs above the current level.

While training could help to develop IT professionals so they are able to perform more effectively for the state, the training and skills gained would also make the IT professional more appealing to being lured away from the state and increase the cost for recruitment and retention.

Committee Options:

- 1) The committee may wish to take no action on personnel maintenance at this time
- 2) The committee may wish to direct staff to further develop committee options for identifying or addressing the fiscal impacts of personnel maintenance, such as:
 - a) A unified presentation of IT professional training costs contained in the Executive Budget
 - b) A unified presentation of IT pay plan adjustments in the Executive Budget that fall outside the pay plan (HB 13)
 - c) Requirements for presenting IT professional personnel maintenance cost decision packages in the Executive Budget

⁴ Statutory authority to develop an alternative compensation system is granted through 2-18-303, MCA. For further information on the Broadband Pay Plan refer to **Alternative Compensation Plan (Broadbanding)**, a report prepared for the Legislative Finance Committee by Legislative Fiscal Division staff, June 4, 2002, and available at http://leg.mt.gov/content/publications/fiscal/interim/financecmty_june2002/broadband_report.pdf or from the Legislative Fiscal Division

OTHER IT ISSUES IDENTIFIED IN THE PLAN UPDATE

In addition to the issues identified above that were supported in the plan update with specific goals, strategies, or strategic initiatives, other issues were included that could lead to efficiencies of state IT resources. The plan update identifies the following as environmental issues that could heavily influence the goals, strategic initiatives, and action presented in the Montana IT strategic plan:

- Outsourcing verses use of internal resources
- Centralization verses decentralization

Both of the above issues could yield fiscal efficiencies for Montana, if done in the appropriate way. However, both also come with tradeoffs that must be considered and are situation and application dependent.

To Outsource or Use Internal Resources

A dilemma faced when: 1) a new IT project is started; 2) workload becomes overwhelming for existing state IT staff; or 3) an unfamiliar IT technology is involved, is whether to add state resources or contract for the additional support. The decision to outsource or add state FTE is complex. The following table illustrates some of the tradeoffs involved in the decision:

	Outsource	Use State Resources
Advantages	<ul style="list-style-type: none">○ Doesn't add state FTE and staff costs stop after the need is gone○ Contracts can specify special skill sets needed for a project	<ul style="list-style-type: none">○ Lower hourly cost○ System knowledge is maintained by the state○ Direct control of staff○ Higher business process knowledge
Disadvantages	<ul style="list-style-type: none">○ Higher hourly cost○ System knowledge leaves when the contract ends○ Staff managed from outside○ No business process knowledge	<ul style="list-style-type: none">○ Adds state FTE which continue even after the immediate need is gone○ Staff may not possess the desired skill set without incurring training costs

Depending on the importance given to each of the factors and the life expectancy of the project or system, the outcome from each decision could lead to a different outcome. The plan update implies that a process to better evaluate these decisions could result in cost saving for the state.

Committee Action

The committee may wish to ask the Department of Administration what actions are being implemented or planned to develop a process for assisting state agencies in making more consistent decisions regarding outsourcing of state IT work.

To Centralize or Decentralize

When an IT system is planned, one key question critical to its design is whether it will be implemented in a centralized or decentralized approach. This decision is not specific to IT resources, but applies to other services and systems in both the public and private sectors. For example, the Office of Budget and Program Planning has been encouraging agencies to lease vehicles from the State Motor Pool instead of each agency purchasing and maintaining their own vehicles. Here, there is a movement from a decentralized approach to a centralized approach, and it is being done to provide consistencies in the standards of vehicle maintenance and to take advantage of other economies of scale.

The plan update lists some general rules to guide in the strategic decision whether to centralize or decentralize an IT resource. The rules recommend centralizing when:

- The application or network serves multiple agencies
- The application is required to be available around-the-clock and requires constant support of an operator
- Data is common across multiple agencies and applications
- Economies of scale gained from centralizing provide cost or service efficiencies

The rules recommend decentralizing when:

- Applications require highly specialized industry knowledge
- Applications serve only a single agency
- Systems and servers interface to agency unique hardware such as point of sale terminals or kiosks

The legislative guiding principles for IT resources included in the Montana Information Technology Act state that common data should be entered once and shared among agencies whenever feasible and cost-effective, and unwarranted duplication, similar information technology systems, and data management applications should be minimized and implemented and managed in a coordinated manner. Although this policy statement doesn't specifically state that a centralized approach should be the default, it supports the general rules contained in the plan update.

Prior to enactment of the Montana Information Technology Act in 2001, state agencies developed systems to support their agency needs without much regard to duplicating systems that used similar data and may have performed similar functions. The legislature recognized that sharing the common data and building only one system instead of many to deliver common functions could provide savings and efficiencies. A significant obstacle to meeting the above legislative policy for IT resources is the resistance agencies present to giving up or sharing control for IT systems.

Committee Action

The committee may wish to ask the Department of Administration what progress the state has made regarding identifying and eliminating unwarranted duplication of data and systems. The committee may also wish to ask the department to identify the obstacles that impede meeting the policies of the act and if any statutory changes could be made to address the obstacles.

CONCLUSION

The Montana Information Technology Act requires development of a biennial statewide IT strategic plan. The act specifies that the statewide plan provides the general direction for the state as a single entity and constrains how state agencies must develop and manage IT resources to support their agency specific business processes. Agencies are required to follow the principles established in the state strategic plan in preparing agency specific IT strategic plans for their unique needs.

Interim legislative involvement in developing the statewide IT strategic plan is limited to:

- Limited legislator membership on the IT advisory board that advises the Department of Administration regarding IT policies, standards, and planning
- A review of and comments on the statewide IT strategic plan by the LFC prior finalizing each biennial update

The statewide IT strategic plan for the 2007 biennium does not deviate significantly from the direction specified in the plan for the 2005 biennium. The primary difference is that the updated plan shifts the focus from technologies to business management practices.

APPENDIX A COMPARISON OF CURRENT AND UPDATED IT STRATEGIC PLANS	
2005 BIENNIUM PLAN	2007 BIENNIUM PLAN
OVERALL THEME	
o Moving Forward Together	o Roadmap for the Future
COMMON THEMES	GUIDING PRINCIPLES
o Customer-focus o Economic empowerment o Strategic relationships o Reliability o Effective management	o Customer service: Montana's IT exists to provide the citizens, business community, and state employees with timely, convenient access to information and services o Business leads: Business needs drive IT solutions o Best practices: Montana's IT business will be managed using the best private and public business and technology methodologies o E-government: e-government technology represents the future for delivery of government services o Partnership: IT undertakings are partnership of ITSD, agencies, federal government, local government, and the private sector
GOALS AND STRATEGIES	
o The state will maximize use of government IT resources through strategic relationships with business and other government entities to enhance the quality of life for Montanans > Identify opportunities for cooperation > One-stop Initiatives > Leverage the use of IT resources	o Customer focus > Aggressively deploy e- government services > One-stop Initiatives > Assess requirements for 24x7x365 service > Develop a common website "look and feel" for the enterprise o Do IT right > Business process analysis

<ul style="list-style-type: none"> o The state will use appropriate and disciplined project management methodologies, and make strategic and fiscally responsible investment in IT resources <ul style="list-style-type: none"> > Project management support > Investment management > Share project experience > Contract management > Existing system support o State government will enhance the performance of agencies' mandates, missions, core competencies, and business processes through the appropriate and effective application of current and standardized IT resources <ul style="list-style-type: none"> > Enterprise approach > Use technology to enable business processes > Evaluate business processes > Videoconferencing > Research and evaluation o State government standards will promote the sharing of IT resources, including data, information, business function expertise, and technology among agencies to minimize unwarranted duplication <ul style="list-style-type: none"> > Shared resources > Information technology expertise > Standards, tools, and methodologies > Information technology plan o The state will require its IT systems maintain confidentiality and integrity while providing enterprise IT resources consistent with customer needs <ul style="list-style-type: none"> > Security standards > Information security advisory group > Agency security teams o The state will require reliable service delivery from its IT systems and maintain up-to-date plans and procedures for 	<ul style="list-style-type: none"> > Consistent contract management processes > Project management and oversight methodologies > Balance between centralized and decentralized > IT standards to support a consistent enterprise approach to IT o Move forward together <ul style="list-style-type: none"> > Manage IT assets like any other class of asset > Promote sharing of IT resources (economies-of-scale, minimize unnecessary duplication) > Identify and pursue collaboration with a wide array of other entities (federal government, local government, school districts, tribes, private organizations) o The right people <ul style="list-style-type: none"> > Share knowledge > Train and educate IT staff > Career development o Do IT safely <ul style="list-style-type: none"> > Business continuity and agency security teams > Develop and enforce enterprise-wide security standards > Disaster recovery and business continuity planning and exercises o Fiscal responsibility <ul style="list-style-type: none"> > Incorporate fiscal evaluations and processes into business case review > Fiscal review appropriate to the size of the proposed expenditure > Staff augmentation analysis > Monthly large project oversight > Post implementation financial review
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<p>enterprise wide disaster recovery and business continuity. Business continuity involves IT systems, human resources, knowledge, physical resources, and communications</p> <ul style="list-style-type: none"> > Disaster recovery and business continuity planning > Agency plans > High availability > Business continuity team <p>o State government will use secure, coordinated, standardized, and shared IT systems to deliver integrated services to its customers</p> <ul style="list-style-type: none"> > Existing infrastructure > Research and evaluation > Unique, enterprise-wide access > Telecommunications <p>o The state will develop a comprehensive mechanism for obtaining IT expertise both internal to state government and through external resources in order to support Montana's IT vision in an environment of constant technological change</p> <ul style="list-style-type: none"> > Training and education > Centers of IT excellence > Career development 	
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STRATEGIC INITIATIVES	
<ul style="list-style-type: none"> o Implementing best practices <ul style="list-style-type: none"> > Information technology investment management > Project management > Sharing IT infrastructure > Contractor management o SummitNet o Montana educational network cooperative o Public safety communications o E-government o Montana geographic information systems o Criminal justice information systems project 	<ul style="list-style-type: none"> o Enterprise architecture o E-government o Implement best practices o Workflow and document handling o Business process modeling o IT workforce development
	IT ISSUES
	<ul style="list-style-type: none"> o Outsourcing -verses- use of internal resources o Centralization –verses- decentralization o Data management o People management o Enterprise perspective o Examination of business processes